




AMENDMENT TRANSMITTAL LETTER			Docket No. M4065.0237/P237-C	
Application No. 10/768,081-Conf. #8284	Filing Date February 2, 2004	Examiner E. J. Wojciechowicz	Art Unit 2815	
Applicant(s): Mark Fischer et al.				
Invention: DOUBLE BLANKET ION IMPLANT METHOD AND STRUCTURE				
TO THE COMMISSIONER FOR PATENTS				
Transmitted herewith is an amendment in the above-identified application. The fee has been calculated and is transmitted as shown below.				
CLAIMS AS AMENDED				
	Claims Remaining After Amendment	Highest Number Previously Paid	Number Extra Claims Present	Rate
Total Claims	15	- 30 =		x
Independent Claims	2	- 4 =		x
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>				
Other fee (please specify):				
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT:				0.00
<input checked="" type="checkbox"/> Large Entity <input type="checkbox"/> Small Entity				
<input checked="" type="checkbox"/> No additional fee is required for this amendment.				
<input type="checkbox"/> Please charge Deposit Account No. _____ in the amount of \$ _____. A duplicate copy of this sheet is enclosed.				
<input type="checkbox"/> A check in the amount of \$ _____ to cover the filing fee is enclosed.				
<input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.				
<input checked="" type="checkbox"/> The Director is hereby authorized to charge and credit Deposit Account No. <u>04-1073</u> as described below. A duplicate copy of this sheet is enclosed.				
<input checked="" type="checkbox"/> Credit any overpayment.				
<input checked="" type="checkbox"/> Charge any additional filing or application processing fees required under 37 CFR 1.16 and 1.17.				
<div style="text-align: center;"> _____ Thomas J. D'Amico Attorney/Agent Reg. No.: 28,371</div>			Dated: <u>April 24, 2006</u>	
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Docket No.: M4065.0237/P237-C
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Mark Fischer et al.

Application No.: 10/768,081

Confirmation No.: 8284

Filed: February 2, 2004

Art Unit: 2815

For: DOUBLE BLANKET ION IMPLANT
METHOD AND STRUCTURE

Examiner: E. J. Wojciechowicz

REQUEST FOR RECONSIDERATION

MS AF Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The application has been carefully reviewed in light of the rejection dated February 24, 2006. Claims 56-70 are pending in the application. Applicant reserves the right to pursue the original claims and other claims in this and other applications.

Claims 56-70 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al. (US 5,757,045) in view of Kao et al. (US 6,144,068). This rejection is respectfully traversed.

Applicants respectfully submit that Kao et al. is not a proper prior art reference under 35 U.S.C. § 103(a). The present application was filed on February 2, 2004, but claims priority from Application No. 09/532,094, filed on March 21, 2000 (now U.S. Pat.

No. 6,482,707). U.S. Patent 6,144,068 ("Kao et al.") was filed on March 25, 1999, and issued on November 7, 2000. As a result, Kao et al. qualifies as prior art only under 35 U.S.C. § 102(e). The subject matter of Kao et al. and of the claimed invention were, at the time the invention was made, subject to an obligation of assignment to the same entity: Micron Technology, Inc. The Assignment for this application was recorded in the PTO on September 14, 2000 on Reel 11073, Frame 0891. The Assignee of Kao et al. is Micron Technology, Inc., which was recorded in the PTO and appears on the face of the patent. Therefore, section 35 U.S.C. § 103(c) is applicable to the present situation. Nevertheless, since Kao et al. claims domestic priority back to U.S. Patent Number 5,811,338, which would be a proper reference against the current application, this rejection is addressed below.

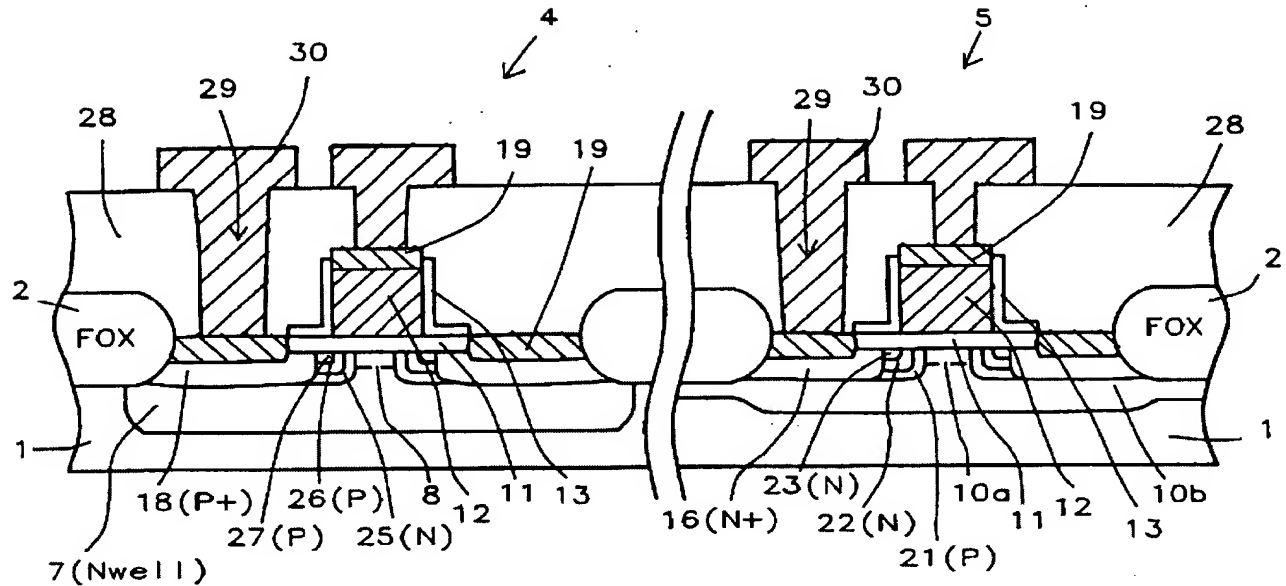
Claim 56 recites, *inter alia*, an integrated circuit comprising "a gate structure having sidewalls ...; a plurality of first diffusion regions implanted with a first dopant ...; a plurality of second diffusion regions implanted with a second dopant, said plurality of second diffusions regions each being adjacent to the sidewalls of said gate structure; wherein each of said first diffusion regions is associated with and located beneath and adjacent to a respective second diffusion region; each of said first diffusion regions includes a portion extending beneath said gate structure; and none of said plurality of second diffusion regions include any portion which extends beneath said gate structure" (emphasis added). Neither Tsai et al. nor Kao et al. disclose, teach, or suggest these limitations.

Claim 66 recites a semiconductor device comprising, *inter alia*, "a gate structure ... having a thermally reoxidized sidewall ...; and a plurality of diffusion regions, each of said diffusion regions being formed adjacent to the thermally reoxidized sidewall; wherein each of said diffusion regions respectively comprise first and second portions

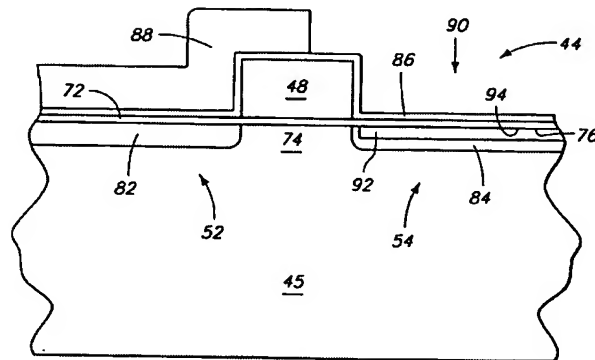
respectively having first and second dopant concentrations ...; each of said first portions is partially located beneath said interior surface of said thermally reoxidized sidewall; none of said second portion is located underneath said interior surface of said thermally reoxidized sidewall, and each of said first portions is associated with and located beneath and adjacent to a respective associated second portion" (emphasis added). Neither Tsai et al. nor Kao et al. disclose, teach, or suggest these limitations.

To the contrary, Tsai et al. teaches in FIG. 13 p-type region 21, and n-type regions 22, 23, and 16. N-type region 22 extends below the gate structure. N-type region 23 does not extend below the gate, but it is also not adjacent to a p-type region, such as p-type region 21. N-type region 16 does not extend below the gate, but it also is not located adjacent to the sidewall of gate structure 12. Tsai et al. FIG. 13 (reproduced below). The doped regions are not located adjacent to the sidewall of the gate structure. Applicants respectfully submit that there is no first diffusion region associated with and located beneath and adjacent to respective second diffusion region where the first diffusion region includes a portion extending beneath said gate structure as recited in claim 56. Applicants respectfully submit that there is further no first diffusion region associated with and located beneath and adjacent to respective second diffusion region where the first diffusion region is partially located beneath said interior surface of said thermally reoxidized sidewall as recited in claim 66.

Tsai et al. FIG. 13



Nor does Kao et al. teach these limitations. To the contrary, Kao et al. teaches in FIG. 6 internal junction region implant 92 and low conductivity implant 84, neither of which extend beneath gate 48. Kao et al. FIG. 6 (reproduced below). Although the Office Action takes the position at page 2 that "regions (92) and (84) [are] beneath the gate structure," low conductivity implant 84 and internal junction region implant 92 extend only below part of insulative layer 86. Applicants respectfully submit that there is no first diffusion region associated with and located beneath and adjacent to respective second diffusion region where the first diffusion region includes a portion extending beneath said gate structure as recited in claim 56. Applicants respectfully submit that there is further no first diffusion region associated with and located beneath and adjacent to respective second diffusion region where the first diffusion region is partially located beneath said interior surface of said thermally reoxidized sidewall as recited in claim 66.

Kao et al. FIG. 6

Moreover, M.P.E.P. §2143 delineates the three criteria for establishing a *prima facie* case of obviousness as: 1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; 2) there must be a reasonable expectation of success; and 3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. The Office Action has failed to make a *prima facie* case of obviousness under this M.P.E.P. provision. Neither of the cited references contain a suggestion or a motivation for their combination. Neither sets forth a reasonable expectation of success in their combination. The Office Action does not identify where a suggestion to combine the references exists or why a reasonable expectation of success of combining the references exists. Rather, information contained in the current application is impermissibly used, in hindsight, to pick and choose features of the references to combine to arrive at the present invention.

Since Tsai et al. and Kao et al. do not disclose, teach, or suggest all the limitations of claims 56 and 66, claims 56 and 66 are not obvious over the cited references. Claims 57-65 depend from claim 56 and are patentable at least for the reasons mentioned above. Claims 67-70 depend from claim 66 and are patentable at least for the reasons

least for the reasons mentioned above. Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of claims 56-70 be withdrawn.

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Dated: April 24, 2006

Respectfully submitted,

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